CLAIMS

We claim:

1. An electronic medical record comprising, single nucleotide polymorphism data of a subject correlated to electronic medical history data of said subject.

2. The electronic medical record of Claim 1, wherein said electronic medical history data of said subject comprises prescription data.

3. The electronic medical record of Claim 2, wherein said prescription data comprising drug reaction data.

4. The electronic medical record of Claim 1, wherein said single nucleotide polymorphism data comprises data derived from an in vitro diagnostic single nucleotide polymorphism detection assay.

5. The electronic medical record of Claim 1, wherein said single nucleotide polymorphism data comprises data derived from a panel comprising a plurality of single nucleotide polymorphism detection assays.

6. The electronic medical record of Claim 5, wherein said panel comprises detection assays that detect medically associated single nucleotide polymorphisms.

7. The electronic medical record of Claim 6, wherein said panel comprises a plurality of single nucleotide polymorphism detection assays that detect single nucleotide polymorphisms associated with a disease.

8. The electronic medical record of Claim 7, wherein said panel comprises a plurality of detection assays that detect polymorphisms associated with one or more medically relevant subject areas selected from the group consisting of cardiovascular

disease, oncology, immunology, metabolic disorders, neurological disorders, musculoskeletal disorders, endocrinology, and genetic disease.

9. The electronic medical record of Claim 7, wherein said panel comprises a plurality of single nucleotide polymorphism detection assays associated with two or more diseases.

10. The electronic medical record of Claim 5, wherein said panel comprises a plurality of single nucleotide polymorphism detection assays that detect polymorphisms in drug metabolizing enzymes.

11. The electronic medical record of Claim 4, wherein said single nucleotide polymorphism data comprises data derived from a plurality of in vitro diagnostic single nucleotide polymorphism detection assays.

12. The electronic medical record of Claim 11, wherein said detection assays comprises two or more unique invasive cleavage assays.

13. The electronic medical record of Claim 12, wherein one or more of said two or more unique invasive cleavage assays detected at least one single nucleotide polymorphism.

14. The electronic medical record of Claim 13, wherein said at least one single nucleotide polymorphism is associated with a medical condition.

15. The electronic medical record of Claim 12, wherein said two or more unique invasive cleavage assays comprise at least 10 unique detection assays.

16. The electronic medical record of Claim 12, wherein said two or more unique invasive cleavage assays comprise at least 1000 unique detection assays.

17. The electronic medical record of Claim 12, wherein said two or more unique invasive cleavage assays comprise at least 10,000 unique detection assays.

18. The electronic medical record of Claim 12, wherein said two or more unique invasive cleavage assays comprise at least 35,000 unique detection assays.

19. The electronic medical record of Claim 1, wherein said single nucleotide polymorphism data is derived from an analyte-specific reagent assay.

20. The electronic medical record of Claim 1, wherein said single nucleotide polymorphism data is derived from at least one clinically valid detection assay.

21. The electronic medical record of Claim 1, wherein said electronic medical record is resident on an insurance company computer system.

22. The electronic medical record of Claim 1, wherein said electronic medical record is resident on a health care provider computer system.

23. The electronic medical record of Claim 22, wherein said health care provider is selected from the group consisting of a physician computer, a hospital computer, a clinic computer, and a health maintenance organization computer.

24. The electronic medical record of Claim 1, wherein said electronic medical record is resident on a government computer system.

25. The electronic medical record of Claim 1, wherein said electronic medical record is resident on a drug store computer system.

26. The electronic medical record of Claim 1, further comprising medical billing data.

27. The electronic medical record of Claim 1, further comprising insurance claim data.

28. The electronic medical record of Claim 1, further comprising scheduling data.

29. A computer system comprising the electronic medical record of Claim 1.

30. The computer system of Claim 29, wherein said computer system is configured for receiving single nucleotide polymorphism data from the Internet.

31. The computer system of Claim 29, further comprising a software application configured to receive single nucleotide polymorphism data automatically via a communications network.

32. The computer system of Claim 29, further comprising a software application for categorizing said data.

33. The computer system of Claim 29, further comprising a software application for carrying out a bioinformatics analysis routine.

34. The computer system of Claim 29, further comprising a software application for carrying out a mathematical manipulation routine.

35. A method for determining a correlation between a polymorphism and a phenotype, comprising:

a) providing:

i) samples from a plurality of subjects;

ii) medical records from said plurality of subjects, wherein said medical records contain information pertaining to a phenotype of said subjects;

iii) detection assays that detect a polymorphism

b) exposing said samples to said detection assays under conditions such that the presence or absence of at least one polymorphism is revealed; and

c) determining a correlation between said at least one polymorphism and said phenotype of said subjects.

36. The method of Claim 35, wherein said plurality of subjects comprises 1000 or more subjects.

37. The method of Claim 35, wherein said plurality of subject comprises 10,000 or more subjects.

38. The method of Claim 35, wherein said information pertaining to a phenotype comprises information pertaining to a disease.

39. The method of Claim 35, wherein said information pertaining to a phenotype comprises information pertaining to a drug interaction.

40. The method of Claim 35, wherein said medical record comprises an electronic medical record.

41. The method of Claim 35, wherein said sample comprises a blood sample.

42. The method of Claim 35, wherein said detection assay comprises a hybridization assay.

43. The method of Claim 42, wherein said hybridization assay comprises an enzyme-based hybridization assay.

44. The method of Claim 43, wherein said enzyme-based hybridization assay comprises an invasive cleavage assay.

45. The method of Claim 35, wherein said polymorphism comprises a single nucleotide polymorphism.

46. An electronic library comprising a plurality of electronic medical records for different subjects, each of said electronic medical records comprising, single nucleotide polymorphism data of said subject correlated to electronic medical history data of said subject.

47. The electronic library of Claim 46, wherein said electronic medical history data comprises prescription data.

48. The electronic library of Claim 47, wherein said prescription data comprises drug reaction data.

49. The electronic library of Claim 46, wherein said single nucleotide polymorphism data comprises data derived from one or more in vitro diagnostic single nucleotide polymorphisms detection assays.

50. The electronic library of Claim 46, wherein said single nucleotide polymorphism data comprises data derived from a panel, said panel comprising a plurality of single nucleotide polymorphisms detection assays.

51. The electronic library of Claim 50, wherein said panel comprises detection assays that detect medically associated single nucleotide polymorphisms.

52. The electronic library of Claim 51, wherein said panel comprises a plurality of single nucleotide polymorphisms detection assays that detect single nucleotide polymorphisms associated with a disease.

53. The electronic library of Claim 52, wherein said panel comprises a plurality of detection assays that detect polymorphisms associated with one or more medically relevant subject areas selected from the group consisting of cardiovascular disease, oncology, immunology, metabolic disorders, neurological disorders, musculoskeletal disorders, endocrinology, and genetic disease.

54. The electronic library of Claim 52, wherein said panel comprises a plurality of single nucleotide polymorphism detection assays associated with two or more diseases.

55. The electronic library of Claim 50, wherein said panel comprises a plurality of single nucleotide polymorphism detection assays that detect polymorphisms in drug metabolizing enzymes.

56. The electronic library of Claim 49, wherein said single nucleotide polymorphism data comprises data derived from a plurality of in vitro diagnostic single nucleotide polymorphism detection assays for each said different subject.

57. The electronic library of Claim 46, wherein said detection assays comprises two or more unique invasive cleavage assays.

58. The electronic library of Claim 57, wherein one or more of said two or more unique invasive cleavage assays detected at least one single nucleotide polymorphism.

59. The electronic library of Claim 58, wherein said at least one single nucleotide polymorphism is associated with a medical condition.

60. The electronic library of Claim 57, wherein said two or more unique invasive cleavage assays comprise at least 10 unique detection assays.

61. The electronic library of Claim 57, wherein said two or more unique invasive cleavage assays comprise at least 1000 unique detection assays.

62. The electronic library of Claim 57, wherein said two or more unique invasive cleavage assays comprise at least 10,000 unique detection assays.

63. The electronic library of Claim 57, wherein said two or more unique invasive cleavage assays comprise at least 35,000 unique detection assays.

64. The electronic library of Claim 46, wherein said single nucleotide polymorphism data for each said different subjects is derived from an analyte-specific reagent assay.

65. The electronic library of Claim 46, wherein said single nucleotide polymorphism data for each said different subjects is derived from at least one clinically valid detection assay.

66. The electronic library of Claim 46, wherein said electronic medical record for each said different subject is resident on an insurance company computer system.

67. The electronic library of Claim 46, wherein said electronic medical record for each said different subject is resident on a health care provider computer system.

68. The electronic medical record of Claim 67, wherein said health care provider is selected from the group consisting of a physician computer, a hospital computer, a clinic computer, and a health maintenance organization computer.

69. The electronic library of Claim 46, wherein said electronic medical record for each said different subject is resident on a government computer system.

70. The electronic library of Claim 46, wherein said electronic medical record for each said different subject is resident on a drug store computer system.

71. The electronic library of Claim 46, further comprising medical billing data for each said different subject.

72. The electronic library of Claim 46, further comprising insurance claim data correlated to each said different subject data.

73. The electronic library of Claim 72, further comprising social security number data correlated to each said different subject data.

74. The electronic library of Claim 46, further comprising scheduling data correlated to each said different subject.

75. A computer system comprising the electronic library of Claim 46.

76. The computer system of Claim 75, wherein said computer system is configured for securely receiving single nucleotide polymorphism data from the Internet.

77. The computer system of Claim 75, further comprising a routine to receive single nucleotide polymorphism data for each said different subject automatically via a communications network.

78. The computer system of Claim 75, further comprising a routine to receive single nucleotide polymorphism data for each said different subject from nodes of a national, regional or world-wide communications network.

79. The computer system of Claim 75, further comprising a software application for categorizing said data for said different subjects.

80. The computer system of Claim 78, further comprising a software application for carrying out a bioinformatics analysis on said data for each said different subject.